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10/561,314

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EXAMINER

HUR, ECE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/561,314

Applicant(s)

YAHATA ET AL.

Examiner

ECE HUR

Art Unit

2109

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/19/2005.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

This action is responsive to application filed on December 19, 2005 in which Claims 1 to 11 are presented for examination. This application is a 371 of PCT/ JP04/09515, filed on June 29, 2004. Applicant is claiming priority for the application 60/483,228, filed on June 20, 2003.

Status of Claims

Claims 1-11 are pending in the case. Claims 1, 5, 9, 10 and 11 are the independent claim.

Claim 10 is rejected under 35 U.S.C. 101.

Claims 1 and 11 are rejected under 35 U.S.C. 102(e).

Information Disclosure Statement Acknowledgement

The information disclosure statement filed on December 19, 2005 is in compliance with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. It has been placed in the application file, the information referred to therein has been considered as to the merits. However document number 09-08118, 03/28/1997 could not be located by the examiner.

Specification Objection

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is

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requested in correcting any errors of which applicant may become aware in the specification.

Drawings Objection

Due to the lengthy specification the drawings has not been checked to the extend necessary to determine whether the drawings are comply with 37 CFR 1.84(p)(4) and (p)(5).

Claim Objections

The claims in this application is on a separate sheet, however page number does start with "1", it starts with "2". Appropriate correction is required in response to this action.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 10 is rejected under 35 U.S.C. 101.

Claim 10 is referring to a "program" and program is software per se.

Software fails to fall within a statutory category and the claimed invention is directed to non-statutory subject matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Ikeda et al., US 2006/0188223 A1.

The applied reference has a common inventor "Ikeda" and common assignee "MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD." with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding Claim 1, Ikeda discloses a recording medium, reproduction device, recording method, program, and reproduction method. Specifically, Ikeda discloses a recording medium such as a BD-ROM for distribution of movies, and

also to a reproduction apparatus for such a recording medium. More particularly, Ikeda's invention relates to an improvement in interactive control techniques.

Ikeda discloses the claimed aspect of a recording medium comprising a graphics stream which represents an interactive display including a plurality of graphical button materials to be overlaid with a motion picture in FIG. 13, gs2, the control defined by the Interactive Composition System is to be executed in synchronism with the display timing of a picture pt1 included in the video stream. Furthermore, an interactive display tm1 composed of the buttons A-D is overlaid (gs1) with the picture pt1 to produce a composite screen gs2 and the interactive display composed of multiple buttons is presented in synchronism with a specific video image. (Ikeda, Page 8, Paragraph 0146).

Ikeda discloses the claimed aspect of said graphics stream includes a plurality of graphics data set each forming a group of graphics data which renders a predetermined state of said graphical button materials and plurality of graphics, data sets respectively renders different predetermined states of said graphical button materials in FIG. 36, wherein the graphics object (p) is designated through the steps S69 and S70, the graphics object (p) is rendered onto the graphics plane 8 at the position shown by the button_horizontal_position and button_vertical_position fields (step S72). Furthermore, the above processing is repeated for each piece of button information within the ICS. In doing so, of a plurality of graphics objects associated with each button state, the first graphics object is rendered for each button on the graphics plane 8 and the

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duration taken for rendering all the graphics object stored in the object buffer 15 is the duration td1 shown in FIGS. 23 and 24. (Ikeda, Page 16, Paragraph 0281).

Regarding Claim 2, most of the limitations have been met in the rejection of Claim 1. See the rejection of Claim 1 for details. Ikeda discloses the claimed aspect of recording medium with different predetermined states are respectively a normal state, a selected state, and an active state in FIG. 19, wherein the first level the graphics objects An, Bn, Cn, Dn, As, Bs, Cs, Ds, Aa, Ba, Ca, and Da that are referenced by the button-state groups and the numerical subscript n as in An, Bn, Cn, and Dn indicates a respective button in the normal state. Similarly, the numerical subscript s as in As, Bs, Cs, Ds indicates a respective button in the selected state, and the numerical subscript a as in Aa, Ba, Ca, and Da indicates a respective button in the activated state. Furthermore, Fig. 19 shows on the second level the button-state groups to which the graphics objects shown on the first level belong. (Ikeda, Page 9, Paragraph 0156, lines 1-10).

Ikeda Discloses the claimed aspect of plurality of graphics data sets are disposed in an order of a normal-state set, a selected-state set, and an active-state set in FIG. 19, wherein the button-state groups are arranged in the order of the normal state as the selected state as the activated state and this order is determined so that the reproduction apparatus first reads the interactive composition constituting the first interactive display, and then reads the interactive composition to be presented only after update. (Ikeda, Page 9, Paragraph 0155, lines 8-14).

Regarding Claim 3, most of the limitations have been met in the rejection of Claim 1. See the rejection of Claim 1 for details. Ikeda, discloses the claimed aspect of recording medium comprising play list information main path information indicates a video stream as a main stream and defines a reproduction section of the main stream in FIG. 6 and FIG. 7 and play list information includes main-path information and sub-path information, wherein YYY.MPLS (PlayList Information) is a table serving as a PlayList defining reproduction paths, and is composed of a plurality of pieces of PlayItem information (PlayItem Information #1, #2, #3, . . . #n) and the number of PlayItem information pieces (Number) and FIG. 6 illustrates an internal structure of the PlayList information. PlayList information shows one or more logical segments for reproduction each defined by PlayItem information. As the dotted lines hs1 indicate, the structure of PlayItem information is excerpted to be shown in detail. Furthermore, the PlayItem information is composed of:

"clip_information_file_name" showing the file name of a reproduction segment within the AV Clip to which the in_time and out_time of the reproduction segment belong; "clip_codec_identifier" showing the coding method by which the AV Clip is coded; "in_time" showing the time corresponding to the start point of the reproduction segment; and "out_time" showing the time corresponding to the end point of the reproduction segment. (Ikeda, Page 4, Paragraph 0080).

Ikeda, discloses the claimed aspect of said sub-path information indicates said graphics stream as a sub stream which synchronizes with said main stream,

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defines a reproduction section of said sub stream and includes reproduction information, wherein a reproduction segment is defined by the indirect reference by time, using the EP_map as a reference table. FIG. 7 is a view schematically illustrating the indirect reference by time and the AV Clip is composed of a plurality of Access Units. Furthermore, the EP_map in the Clip information specifies the sector address of each Access Unit as indicated by arrows ay1, ay2, ay3, and ay4. Each of the arrows jy1, jy2, jy3, and jy4 is a schematic representation of an indirect reference to an Access Unit. In short, each piece of PlayItem Information has a reference (arrows jy1, jy2, jy3, and jy4) specifying by time via the EP_map, the address of a corresponding Access Unit contained in the AV Clip. (Ikeda, Page 4, Paragraph 0081).

Ikeda, discloses the claimed aspect of reproduction information indicates a synchronization point on a reproduction time axis of said main stream and interactive display is represented to be overlayed with a picture of said video stream in said reproduction section of said main stream, in FIG. 13 the control defined by the ICS is to be executed in synchronism with the display timing of a picture pt1 included in the video stream shown in FIG. 13. In this case, an interactive display tm1 composed of the buttons A-D is overlaid (gs1) with the picture pt1 to produce a composite screen gs2. In this way, the interactive display composed of multiple buttons is presented in synchronism with a specific video image. Thus, the ICS makes it possible to present buttons in a way more real to the users. Additionally, Ikeda discloses In FIG. 13, gs2 that the interactive display is represented to be overlayed with a picture of said video stream in said

reproduction section of said main stream. (Ikeda, Page 8, Paragraph 0146).

Regarding Claim 4, most of the limitations have been met in the rejection of Claim 3. See the rejection of Claim 3 for details. Ikeda discloses the claimed aspect of recording medium, further comprising a read-only optical disk wherein video stream is recoded on a read-only optical disk and graphics stream and said video stream are recorded on said recording medium which is a rewritable disk, wherein the BD-ROM is used as the recording medium and a graphics stream recorded on the recording medium, which does not rely on physical characteristics of BD-ROMs. Furthermore, applicable to any recording medium that is capable of recording a dynamic scenario and a graphics stream. Additionally, Ikeda is providing examples of such a recording medium including an optical disc such as a DVD-ROM, a DVD-RAM, a DVD-RW, a DVD-R, a DVD+RW, a DVD+R, a CD-R, or a CD-RW and a magneto-optical disk such as a PD or an MO and a semiconductor memory card such as a Compact Flash card, a SmartMedia card, a Memory Stick card, a MultiMedia Card, or a PCMCIA card and a magnetic disk such as a flexible disk, SuperDisk, Zip, or Klik! And a removable hard disk drive such as ORB, Jaz, SparQ, SyJet, EZFley, or Microdrive and a non-removable hard disk drive. (Ikeda, PAGE 21, Paragraph 0338).

Regarding Claim 5, Ikeda discloses the claimed aspect of a reproduction apparatus for reproducing a video stream and a graphics stream, a graphics

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decoder operable to decode the graphics stream which represents an interactive display including a plurality of graphical button materials to be overlaid with a motion picture, wherein in FIG. 25, wherein an internal structure of a reproduction apparatus illustrated and the video decoder 5 decodes TS packets output from the PID filter 3 to obtain uncompressed pictures, and writes the obtained pictures onto the video plane 6. (Ikeda, Page 12, Paragraph 0198). Furthermore, Ikeda discloses that the graphics plane 8 is a plane memory having a memory area of one screen, and is capable of storing uncompressed graphics of one screen. (Ikeda, Page 12, Paragraph 0201). Additionally, Ikeda discloses that the adder 10 multiplies the uncompressed graphics converted by the CLUT unit 9, by a T value (transparency) defined in the PDS and the adder 10 then performs addition for corresponding pixels in the resulting uncompressed graphics and the uncompressed picture data on the video plane 6 to output a composite image. (Ikeda, Page 12, Paragraph 0203).

Ikeda, discloses the claimed aspect of graphics stream includes a plurality of graphics data sets each forming a group of graphics data which renders a predetermined state of the graphical button materials in FIG. 25, wherein the object buffer 15 stores graphics objects decoded by the stream graphics processor 14. (Ikeda, Page 12, Paragraph 0208). Furthermore the graphics controller 17 decodes an ICS stored in the composition buffer 16, and carries out control based on a decoding result at the timing specified by the PTS attached to the ICS. (Ikeda, Page 13, Paragraph 0210). Additionally, Ikeda discloses that the UO controller 18 detects a user operation made on the remote controller and the

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front panel of reproduction apparatus, and outputs information showing the detected user operation (hereinafter referred to as a UO (User Operations)) to the controller 20. (Ikeda, Page 13, Paragraph 0211).

Ikeda discloses the claimed aspect of said graphics stream includes a plurality of graphics data set each forming a group of graphics data which renders a predetermined state of said graphical button materials and plurality of graphics, data sets respectively renders different predetermined states of said graphical button materials in FIG. 36, wherein the graphics object (p) is designated through the steps S69 and S70, the graphics object (p) is rendered onto the graphics plane 8 at the position shown by the button_horizontal_position and button_vertical_position fields (step S72). Furthermore, the above processing is repeated for each piece of button information within the ICS. In doing so, of a plurality of graphics objects associated with each button state, the first graphics object is rendered for each button on the graphics plane 8 and the duration taken for rendering all the graphics object stored in the object buffer 15 is the duration td1 shown in FIGS. 23 and 24. (Ikeda, Page 16, Paragraph 0281).

Ikeda achieves the claimed aspect of graphics decoder uses the graphics data respectively belonging to a top set and a second-place set in the plurality of graphics data sets for presenting an initial display of the interactive display, and uses the graphics data belonging to remaining ones of the plurality of graphics data sets for updating the interactive display upon a user operation, wherein the graphics decoder 12, the stream graphics processor 14 continues decoding while the graphics controller 17 is clearing or rendering the graphics plane 8 (the

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decode durations of ODS (n), ODS 1, ODS (n) shown on the second level). Since the decoding of the remaining ODSs are continued even during the graphics controller 17 is clearing or rendering the graphics plane 8, the decoding of the remaining ODSs are completed earlier than would otherwise be the case.

Furthermore, updates of the interactive display using those remaining ODSs can be carried out immediately upon a user operation and as a result of such pipeline processing, presentation of the initial interactive display and updates to the display can be carried out speedily. (Ikeda, Page 14, Paragraph 0241).

Additionally, Ikeda illustrated in FIG. 26 and FIG. 27 default selected button specified and not specified, wherein timing chart of the pipeline processing performed by the reproduction apparatus.

Regarding Claim 6, most of the limitations have been met in the rejection of Claim 5. See the rejection of Claim 5 for details. Ikeda discloses the claimed aspect of the reproduction apparatus the different predetermined states are respectively a normal state, a selected state, and an active state and the plurality of graphics data sets are disposed in an order of a normal-state set, a selected-state set, and an active-state Set in FIG. 26, wherein in the case where a default selected button is specified, all of the graphics objects necessary for presentation of the initial interactive display become available on the object buffer 15 upon completion of the decoding of all of the ODSs for the normal state and the first ODS for the selected state. In the figure, at the time shown by the PTS13, all of the graphics objects necessary for presentation of the initial interactive display

become available. (Ikeda, Page 13, Paragraph 0237). Additionally, Ikeda discloses in FIG. 27, a case where a default selected button is specified and a timing chart showing the pipeline processing performed by the reproduction apparatus in the case where no default selected button is specified. In such a case, all of the graphics objects needed for presentation the initial display become available upon completion of decoding all the ODSs for the normal state and for the selected state, and loading the resulting objects to the graphics plane 8 and with this arrangement, the initial interactive display is presented without waiting for completion of the decoding of the ODSs for the activated state. (Ikeda, Page 14, Paragraph 0242, lines 1-11).

Ikeda, discloses the claimed aspect of that the graphics decoder includes a graphics processor operable to decode the graphics data and an object buffer operable to store of decompressed graphics data obtained by the decoding, wherein a graphics plane operable to store at least some of the decompressed graphics data in a graphics data that are to be overlaid with the motion picture in FIG. 25, wherein a graphics decoder, video decoder and video output are illustrated. Furthermore, the graphics decoder has the following of coded data buffer, stream graphics processor, object buffer, composition buffer.

Ikeda discloses the claimed aspect of a graphics controller operable to write the decompressed graphics data in a graphics data set for rendering the selected state to said graphics plane in FIG. 25, wherein Graphics controller, 17 and Graphics Plane, 8 are illustrated.

Regarding Claim 7, most of the limitations have been met in the rejection of Claim 6. See the rejection of Claim 6 for details. Ikeda discloses the claimed aspect of reproduction apparatus comprising a video decoder which decodes the video stream and reads play list information recorded on a recording medium in FIG. 25, wherein the video decoder 5 decodes TS packets output from the PID filter 3 to obtain uncompressed pictures, and writes the obtained pictures onto the video plane 6. (Ikeda, Page12, Paragraph 0198).

Ikeda discloses the claimed aspect of the play list information includes main-path information and sub-path information in FIG. 6 and FIG. 7 and play list information includes main-path information and sub-path information, wherein YYY.MPLS (PlayList Information) is a table serving as a PlayList defining reproduction paths, and is composed of a plurality of pieces of PlayItem information (PlayItem Information #1, #2, #3, . . . #n) and the number of PlayItem information pieces (Number) and FIG. 6 illustrates an internal structure of the PlayList information. PlayList information shows one or more logical segments for reproduction each defined by PlayItem information. As the dotted lines hs1 indicate, the structure of PlayItem information is excerpted to be shown in detail. Furthermore, the PlayItem information is composed of:

"clip_information_file_name" showing the file name of a reproduction segment within the AV Clip to which the in_time and out_time of the reproduction segment belong; "clip_codec_identifier" showing the coding method by which the AV Clip is coded; "in_time" showing the time corresponding to the start point of the

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reproduction segment; and "out_time" showing the time corresponding to the end point of the reproduction segment. (Ikeda, Page 4, Paragraph 0080).

Ikeda, discloses the claimed aspect of said sub-path information indicates said graphics stream as a sub stream which synchronizes with said main stream, defines a reproduction section of said sub stream and includes reproduction information, wherein a reproduction segment is defined by the indirect reference by time, using the EP_map as a reference table. FIG. 7 is a view schematically illustrating the indirect reference by time and the AV Clip is composed of a plurality of Access Units. Furthermore, the EP_map in the Clip information specifies the sector address of each Access Unit as indicated by arrows ay1, ay2, ay3, and ay4. Each of the arrows jy1, jy2, jy3, and jy4 is a schematic representation of an indirect reference to an Access Unit. In short, each piece of PlayItem Information has a reference (arrows jy1, jy2, jy3, and jy4) specifying by time via the EP_map, the address of a corresponding Access Unit contained in the AV Clip. (Ikeda, Page 4, Paragraph 0081).

Ikeda, discloses the claimed aspect of reproduction information indicates a synchronization point on a reproduction time axis of said main stream and interactive display is represented to be overlaid with a picture of said video stream in said reproduction section of said main stream, in FIG. 13 the control defined by the ICS is to be executed in synchronism with the display timing of a picture pt1 included in the video stream shown in FIG. 13. In this case, an interactive display tm1 composed of the buttons A-D is overlaid (gs1) with the picture pt1 to produce a composite screen gs2. In this way, the interactive display

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composed of multiple buttons is presented in synchronism with a specific video image. Thus, the ICS makes it possible to present buttons in a way more real to the users. Additionally, Ikeda discloses in FIG. 13, gs2 that the interactive display is represented to be overlaid with a picture of said video stream in said reproduction section of said main stream. (Ikeda, Page 8, Paragraph 0146).

Regarding Claim 8, most of the limitations have been met in the rejection of Claim 7. See the rejection of Claim 7 for details. Ikeda discloses in FIG. 25 the aspect of recording, wherein FIG. 25 an internal structure of a reproduction apparatus illustrated, the reproduction apparatus according to the present invention is industrially manufactured based on this internal structure. The reproduction apparatus is roughly made up of three parts that are a system LSI, a drive device, and a microcomputer system and the reproduction apparatus manufactured in the above manner is composed of a BD drive 1, a track buffer 2, a PID filter 3, transport buffers 4a, 4b, and 4c, a peripheral circuit 4d, a video decoder 5, a video plane 6, an audio decoder 7, a graphics plane 8, a CLUT unit 9, an adder 10, and a graphics decoder 12, a coded data buffer 13, a peripheral circuit 13a, a Stream Graphics Processor 14, an object buffer 15, a composition buffer 16, a graphics controller 17, a UO controller 18, a player register group 19, and a controller 20. (Ikeda, Page 12, Paragraph 0192). Furthermore, BD drive 1 performs loading, reading, and ejecting of the BD-ROM so as to access the BD-ROM and the track buffer 2 is a FIFO memory and TS packets read from the BD-ROM are removed from the track buffer 2 in the same order as they arrive.

Additionally the graphics plane 8 is a plane memory having a memory area of one screen, and is capable of storing uncompressed graphics of one screen.

Ikeda achieves the claimed aspect of reproduction apparatus wherein the video stream is recorded on a read-only optical disk and the graphics stream and the video stream are recorded on a recording medium which is a rewritable disk, wherein a video stream is recoded on a read-only optical disk and graphics stream and said video stream are recorded on said recording medium which is a rewritable disk, wherein the BD-ROM is used as the recording medium and a graphics stream recorded on the recording medium, which does not rely on physical characteristics of BD-ROMs. Furthermore, applicable to any recording medium that is capable of recording a dynamic scenario and a graphics stream. Additionally, Ikeda is providing examples of such a recording medium including an optical disc such as a DVD-ROM, a DVD-RAM, a DVD-RW, a DVD-R, a DVD+RW, a DVD+R, a CD-R, or a CD-RW and a magneto-optical disk such as a PD or an MO and a semiconductor memory card such as a Compact Flash card, a SmartMedia card, a Memory Stick card, a MultiMedia Card, or a PCMCIA card and a magnetic disk such as a flexible disk, SuperDisk, Zip, or Klik! And a removable hard disk drive such as ORB, Jaz, SparQ, SyJet, EZFley, or Microdrive and a non-removable hard disk drive. (Ikeda, PAGE 21, Paragraph 0338).

Regarding Claim 9, the steps used to achieve the recording medium consists the method of recording medium. Ikeda discloses a recording medium,

reproduction device, recording method, program, and reproduction method.

Specifically, Ikeda discloses a recording medium such as a BD-ROM for distribution of movies, and also to a reproduction apparatus for such a recording medium. More particularly, Ikeda's invention relates to an improvement in interactive control techniques.

Ikeda discloses the claimed aspect of a recording medium comprising a graphics stream which represents an interactive display including a plurality of graphical button materials to be overlayed with a motion picture in FIG. 13, gs2, the control defined by the Interactive Composition System is to be executed in synchronism with the display timing of a picture pt1 included in the video stream. Furthermore, an interactive display tm1 composed of the buttons A-D is overlaid (gs1) with the picture pt1 to produce a composite screen gs2 and the interactive display composed of multiple buttons is presented in synchronism with a specific video image. (Ikeda, Page 8, Paragraph 0146).

Ikeda discloses the claimed aspect of said graphics stream includes a plurality of graphics data set each forming a group of graphics data which renders a predetermined state of said graphical button materials and plurality of graphics, data sets respectively renders different predetermined states of said graphical button materials, wherein in FIG. 36 once the graphics object (p) is designated through the steps S69 and S70, the graphics object (p) is rendered onto the graphics plane 8 at the position shown by the button_horizontal_position and button_vertical_position fields (step S72). Furthermore, the above processing is repeated for each piece of button information within the ICS. In

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doing so, of a plurality of graphics objects associated with each button state, the first graphics object is rendered for each button on the graphics plane 8 and the duration taken for rendering all the graphics object stored in the object buffer 15 is the duration td1 shown in FIGS. 23 and 24. This concludes the description of the step S51. Next, with reference to FIG. 37, a description is given to the subroutine called in the step S54. (Ikeda, Page 16, Paragraph 0281).

Furthermore, Ikeda discloses an application created using data in FIG. 13, gs2.

Regarding Claim 10, Ikeda discloses the aspect of a program embodied on a computer readable medium for enabling a computer to reproduce a graphics stream, said program comprising code operable to cause the computer to perform the steps of reproduction apparatus for reproducing. This is Claim 5 related. Ikeda discloses a description is given to implementation of the controller 20 and the graphics decoder 12 and the controller 20 can be implemented by a general-purpose CPU executing a program of the steps shown by FIGS. 28 and 29. Hereinafter, a description is given to operations performed by the controller 20 with reference to FIGS. 28 and 29. (Ikeda, Page 14, Paragraph 0243).

Ikeda discloses the claimed aspect of a reproduction apparatus for reproducing a video stream and a graphics stream, a graphics decoder operable to decode the graphics stream which represents an interactive display including a plurality of graphical button materials to be overlayed with a motion picture, wherein in FIG. 25, wherein an internal structure of a reproduction apparatus

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illustrated and the video decoder 5 decodes TS packets output from the PID filter 3 to obtain uncompressed pictures, and writes the obtained pictures onto the video plane 6. (Ikeda, Page 12, Paragraph 0198). Furthermore, Ikeda discloses that the graphics plane 8 is a plane memory having a memory area of one screen, and is capable of storing uncompressed graphics of one screen. (Ikeda, Page 12, Paragraph 0201). Additionally, Ikeda discloses that the adder 10 multiplies the uncompressed graphics converted by the CLUT unit 9, by a T value (transparency) defined in the PDS and the adder 10 then performs addition for corresponding pixels in the resulting uncompressed graphics and the uncompressed picture data on the video plane 6 to output a composite image. (Ikeda, Page 12, Paragraph 0203).

Ikeda, discloses the claimed aspect of graphics stream includes a plurality of graphics data sets each forming a group of graphics data which renders a predetermined state of the graphical button materials in FIG. 25, wherein the object buffer 15 stores graphics objects decoded by the stream graphics processor 14. (Ikeda, Page 12, Paragraph 0208). Furthermore the graphics controller 17 decodes an ICS stored in the composition buffer 16, and carries out control based on a decoding result at the timing specified by the PTS attached to the ICS. (Ikeda, Page 13, Paragraph 0210). Additionally, Ikeda discloses that the UO controller 18 detects a user operation made on the remote controller and the front panel of reproduction apparatus, and outputs information showing the detected user operation (hereinafter referred to as a UO (User Operations)) to the controller 20. (Ikeda, Page 13, Paragraph 0211).

Ikeda discloses the claimed aspect of said graphics stream includes a plurality of graphics data set each forming a group of graphics data which renders a predetermined state of said graphical button materials and plurality of graphics, data sets respectively renders different predetermined states of said graphical button materials, wherein in FIG. 36 once the graphics object (p) is designated through the steps S69 and S70, the graphics object (p) is rendered onto the graphics plane 8 at the position shown by the button_horizontal_position and button_vertical_position fields (step S72). Furthermore, the above processing is repeated for each piece of button information within the ICS. In doing so, of a plurality of graphics objects associated with each button state, the first graphics object is rendered for each button on the graphics plane 8 and the duration taken for rendering all the graphics object stored in the object buffer 15 is the duration td1 shown in FIGS. 23 and 24. This concludes the description of the step S51. Next, with reference to FIG. 37, a description is given to the subroutine called in the step S54. (Ikeda, Page 16, Paragraph 0281).

Ikeda achieves the claimed aspect of graphics decoder uses the graphics data respectively belonging to a top set and a second-place set in the plurality of graphics data sets for presenting an initial display of the interactive display, and uses the graphics data belonging to remaining ones of the plurality of graphics data sets for updating the interactive display upon a user operation, wherein the graphics decoder 12, the stream graphics processor 14 continues decoding while the graphics controller 17 is clearing or rendering the graphics plane 8 (the decode durations of ODS (n), ODS 1, ODS (n) shown on the second level). Since

the decoding of the remaining ODSs are continued even during the graphics controller 17 is clearing or rendering the graphics plane 8, the decoding of the remaining ODSs are completed earlier than would otherwise be the case. Furthermore, updates of the interactive display using those remaining ODSs can be carried out immediately upon a user operation and as a result of such pipeline processing, presentation of the initial interactive display and updates to the display can be carried out speedily. (Ikeda, Page 14, Paragraph 0241). Additionally, Ikeda illustrated in FIG. 26 and FIG. 27 default selected button specified and not specified, wherein timing chart of the pipeline processing performed by the reproduction apparatus.

Regarding Claim 11, the steps used to achieve a reproduction apparatus can be used to achieve the methods of reproducing. Ikeda discloses the claimed aspect of a reproduction apparatus for reproducing a video stream and a graphics stream, a graphics decoder operable to decode the graphics stream which represents an interactive display including a plurality of graphical button materials to be overlayed with a motion picture, wherein in FIG. 25, wherein an internal structure of a reproduction apparatus illustrated and the video decoder 5 decodes TS packets output from the PID filter 3 to obtain uncompressed pictures, and writes the obtained pictures onto the video plane 6. (Ikeda, Page 12, Paragraph 0198). Furthermore, Ikeda discloses that the graphics plane 8 is a plane memory having a memory area of one screen, and is capable of storing uncompressed graphics of one screen. (Ikeda, Page 12, Paragraph 0201).

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Additionally, Ikeda discloses that the adder 10 multiplies the uncompressed graphics converted by the CLUT unit 9, by a T value (transparency) defined in the PDS and the adder 10 then performs addition for corresponding pixels in the resulting uncompressed graphics and the uncompressed picture data on the video plane 6 to output a composite image. (Ikeda, Page 12, Paragraph 0203).

Ikeda, discloses the claimed aspect of graphics stream includes a plurality of graphics data sets each forming a group of graphics data which renders a predetermined state of the graphical button materials in FIG. 25, wherein the object buffer 15 stores graphics objects decoded by the stream graphics processor 14. (Ikeda, Page 12, Paragraph 0208). Furthermore the graphics controller 17 decodes an ICS stored in the composition buffer 16, and carries out control based on a decoding result at the timing specified by the PTS attached to the ICS. (Ikeda, Page 13, Paragraph 0210). Additionally, Ikeda discloses that the UO controller 18 detects a user operation made on the remote controller and the front panel of reproduction apparatus, and outputs information showing the detected user operation (hereinafter referred to as a UO (User Operations)) to the controller 20. (Ikeda, Page 13, Paragraph 0211).

Ikeda discloses the claimed aspect of said graphics stream includes a plurality of graphics data set each forming a group of graphics data which renders a predetermined state of said graphical button materials and plurality of graphics, data sets respectively renders different predetermined states of said graphical button materials, wherein in FIG. 36 once the graphics object (p) is designated through the steps S69 and S70, the graphics object (p) is rendered

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onto the graphics plane 8 at the position shown by the button_horizontal_position and button_vertical_position fields (step S72). Furthermore, the above processing is repeated for each piece of button information within the ICS. In doing so, of a plurality of graphics objects associated with each button state, the first graphics object is rendered for each button on the graphics plane 8 and the duration taken for rendering all the graphics object stored in the object buffer 15 is the duration td1 shown in FIGS. 23 and 24. (Ikeda, Page 16, Paragraph 0281).

Ikeda achieves the claimed aspect of graphics decoder uses the graphics data respectively belonging to a top set and a second-place set in the plurality of graphics data sets for presenting an initial display of the interactive display, and uses the graphics data belonging to remaining ones of the plurality of graphics data sets for updating the interactive display upon a user operation, wherein the graphics decoder 12, the stream graphics processor 14 continues decoding while the graphics controller 17 is clearing or rendering the graphics plane 8 (the decode durations of ODS (n), ODS 1, ODS (n) shown on the second level). Since the decoding of the remaining ODSs are continued even during the graphics controller 17 is clearing or rendering the graphics plane 8, the decoding of the remaining ODSs are completed earlier than would otherwise be the case.

Furthermore, updates of the interactive display using those remaining ODSs can be carried out immediately upon a user operation and as a result of such pipeline processing, presentation of the initial interactive display and updates to the display can be carried out speedily. (Ikeda, Page 14, Paragraph 0241).

Additionally, Ikeda illustrated in FIG. 26 and FIG. 27 default selected button

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specified and not specified, wherein timing chart of the pipeline processing performed by the reproduction apparatus.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- 1) Gonzalez, Ruben, US 20070005795 A1, 01/04/2007, "Object Oriented Video System ".
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- 3) Matsui, et al., US 6,580,756, 06/17/2003, "Data transmission method, data transmission system, data receiving method, and data receiving apparatus ".
- 4) Sull, Sanghoon, et al., US 20060064716 A1, 03/23/2006, "Techniques for navigating multiple video streams ".
- 5) De Haan, et al., US 6,701,064, 03/02/2004, "Record carrier, and apparatus and method for playing back a record carrier, and method of manufacturing a record carrier ".

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6) Shiraishi Ryuichi, Fujiwara Shiro, JP2001332006, 11/30/2001, "Back Ground Image Capturing System".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ECE HUR whose telephone number is (571) 270-1972. The examiner can normally be reached on MONDAY-THURSDAY 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, FRANTZ COBY can be reached on (571) 272-4017. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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